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EXAMINER

ABELSON, RONALD B

ART UNIT	PAPER NUMBER
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2666

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DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/272,807

Applicant(s)

BEN-DOR ET AL.

Examiner

Ronald Abelson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 56-88 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 56-88 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 March 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Claim Objections

1. Claim 56-85 are objected to because of the following informalities:

In claim 56 line 5 the second occurrence of - isochronous data - seems to refer to the first occurrence of "isochronous data" on line 5. If this is true, it is suggested to change the second occurrence of - isochronous data - to "the isochronous data".

In claim 71 line 5 the second occurrence of - isochronous data - seems to refer to the first occurrence of "isochronous data" on line 5. If this is true, it is suggested to change the second occurrence of - isochronous data - to "the isochronous data".

In claim 56 line 7 -- host - seems to refer to the first occurrence of "host" on line 2. If this is true, it is suggested to change - host - on line 7 to "the host".

In claim 71 line 7 -- host - seems to refer to the first occurrence of "host" on line 2. If this is true, it is suggested to change - host - on line 7 to "the host".

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In claim 61, 76 line 2 -- filed - should be "field".

In claim 71 line 12 - bus device packets - seems to refer to the first occurrence of " bus device packets" on line 8. If this is true, it is suggested to change - bus device packets - on line 12 to "the bus device packets".

Claims 57-70 and 72-85 are objected since they are dependent upon claim 56 and 71 respectively.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 57-64, 72-79, and 86-88 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claims 57 and 72 recite the limitation "the bus events" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claims 60 and 75 recite the limitation "tunneled request" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claims 86 and 88 recite the limitation "the interface" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim 87 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The applicant does not define a "similar bus" nor "similar bus device" on line 2.

Claims 58 and 59 are rejected since they are dependent upon claim 57, claims 61-64 are rejected since they are dependent upon claim 60 claims 73 and 74 are rejected since they are dependent upon claim 72, and claims 76-79 are rejected since they are dependent upon claim 75.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

5. Claims 56-58, 65-67, 71-73, 80-82, 86 and 88 are rejected under 35 U.S.C. 102(e) as being anticipate by West (US 6,538,996).

Regarding claims 56, 71, 86, and 88, West (US 6,538,996) teaches a network (fig. 3 box 340) having a host (fig. 3 box 100) coupled thereto, the host generating software to generate packets for communication on the network.

The system comprises a bus (fig. 3 connection between fig. 3 box 340 and 110) with a bus device (fig. 3 box 110) coupled thereto, wherein the bus device generates isochronous data and the network operates asynchronously (IP, col. 8 lines 46-52), such that the isochronous data is transported over an asynchronous network (fig. 3 Internet).

The system comprises an interface coupling the network to the bus, the interface and host coordinating to tunnel (fig. 3 box 332) bus device packets over the network between the host

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and the bus device, wherein the host runs an application that generates the bus device packets (fig. 5 box 540, 590)) and relies on an operating system that includes a driver for the bus device (fig. 5 box 544, col. 9 lines 42-43), the driver to issue the bus device packets and redirect the bus device packets to a network stack that encapsulates the bus device packets to create a network packet (fig. 3 box 332) and sends the network packet to the bus device via the interface, the interface to decapsulate the network packet to obtain the bus device packet and forward the bus device packet to the bus device (col. 8 lines 2-5).

Regarding claims 57 and 72, the interface generates network packets that encapsulate the bus events in a network protocol portion (col. 8 lines 2-5).

Regarding claims 58 and 73, the network protocol portion comprises an IP portion (col. 8 lines 2-5).

Regarding claims 65 and 80, the interface comprises a remote peripheral server (West: fig. 3 box 332).

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Regarding claims 66 and 81, the network comprises an Internet Protocol (West: fig. 3 box 130) Ethernet (West: fig. 3 element 340) network.

Regarding claims 67 and 82, the bus comprises a serial bus (fig. 3 see connection between 340 and 110).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claim 87 is rejected under 35 U.S.C. 103(a) as being unpatentable over West.

West is silent on the remote site comprising similar bus and similar bus device to that which generated the bus events.

The examiner takes official notice that it would be obvious for the remote site to be comprised of a similar bus and similar

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bus device to that which generated the bus events since after deencapsulation the format of the data at the remote site is the same as at the transmitting node before the data was encapsulated. This would improve the system by providing a standardized means of processing the data.

8. Claims 59, 60, 64, 74, 75, and 79 rejected under 35 U.S.C. 103(a) as being unpatentable over West as applied to claim 56 above, and further in view of Zhang (US 6,108,345).

Regarding claims 59, 60, 74, and 75, West is silent on the network protocol portion includes a header for information to recreate bus events.

Zhang teaches the network protocol portion includes a header for information to recreate bus events (col. 10 lines 9-52).

Therefore it would have been obvious to one of ordinary skill in the art, having both West and Zhang before him/her and with the teachings [a] as shown by West, a bus with a bus device coupled thereto, wherein the bus device generates isochronous data and the network operates asynchronously, such that the isochronous data is transported over an asynchronous network, and [b] as shown by Zhang, the network protocol portion includes a header for information to recreate bus events, to be motivated

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to modify the system of West by creating a header to store information to recreate bus events in the packet. This would improve the system by providing a proven method for providing the necessary information for de-encapsulation.

Regarding claim 60, note the encapsulation as taught by West involves tunneling (West: fig. 3 box 332).

Regarding claims 64 and 79, it is common for tunneling headers to include packet type and transaction type.

9. Claims 68 and 83 are rejected under 35 U.S.C. 103(a) as being unpatentable over West as applied to claim 56 above, and further in view of Rosenberg (US 6,353,427).

West is silent on the bus (fig. 3: connection between element 340 and box 110) being a parallel bus.

Rosenberg teaches a parallel bus (fig. 1 box 24, col. 5 lines 62-64) connecting a host computer (fig. 1 box 12) and a LAN (col. 5 line 67 - col. 6 line 1).

Therefore it would have been obvious to one of ordinary skill in the art, having both West and Rosenberg before him/her and with the teachings [a] as shown by West, a bus with a bus device coupled thereto, wherein the bus device generates

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isochronous data and the network operates asynchronously, such that the isochronous data is transported over an asynchronous network, and [b] as shown by Rosenberg, a parallel bus connecting a host computer and a LAN, to be motivated to modify the system of West by placing a parallel bus between the LAN and Local Computer of West. This would improve the system by allowing for the transmission of more than 1 channel at a simultaneously.

10. Claims 62, 69, 77, 84 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of West and Zhang as applied to claim 60 above, and further in view of Gerszberg (US 6,307,839).

The combination of West and Zhang is silent on the tunneled packet being an IEEE 1394 packet.

Gerszberg teaches an interface between an IEEE 1394 and IP environment (fig. 2 box 106, 112, col. 6 lines 54-64).

Therefore it would have been obvious to one of ordinary skill in the art, having both the combination of West and Zhang and Gerszberg before him/her and with the teachings [a] as shown by the combination of West and Zhang, a bus with a bus device coupled thereto, wherein the bus device generates isochronous data and the network operates asynchronously, such that the

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isochronous data is transported over an asynchronous network, and [b] as shown by Gerszberg, an interface between an IEEE 1394 and IP environment, to be motivated to modify the system of the combination of West and Zhang by providing for the IEEE 1394 interface of Gerszberg in the system. This would improve the system by allowing for IEEE 1394 data to be transmitted.

11. Claim 63, 70, 78, and 85 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of West and Zhang as applied to claim 60 above, and further in view of Hudecek (US 6,289,207).

The combination of West and Zhang is silent on the tunneled packet being an USB packet.

Hudecek teaches an USB interface in an IP environment (col. 14 lines 59-67).

Therefore it would have been obvious to one of ordinary skill in the art, having both the combination of West and Zhang and Hudecek before him/her and with the teachings [a] as shown by the combination of West and Zhang, a bus with a bus device coupled thereto, wherein the bus device generates isochronous data and the network operates asynchronously, such that the isochronous data is transported over an asynchronous network, and [b] as shown by Hudecek, an USB interface in an IP

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environment, to be motivated to modify the system of the combination of West and Zhang by providing for the USB interface of Hudecek in the system. This would improve the system by since USB interfaces are common in an Internet environment.

Allowable Subject Matter

12. Claims 61 and 76 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. The following is a statement of reasons for the indication of allowable subject matter.

Regarding claims 61 and 76, nothing in the prior art of the record teaches or fairly suggests the type of packet being a group of control packet, an information packet, or an ownership packet, in combination with all the other limitations listed in the claim.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald

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Abelson whose telephone number is (703) 306-5622. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (703) 308-5463. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9600.

ra

Ronald Abelson
Examiner
Art Unit 2666

DMr

DANGTON
PRIMARY EXAMINER